

Vyncolit® G887

Phenolic

Vyncolit N.V.

Message:

Vyncolit G887 is a glass fiber and cellulose filled phenolic molding compound with mechanical and thermal properties. It has improved mechanical properties in comparison with G867.

General Information			
Filler / Reinforcement	Glass fiber reinforced material Fiber filler		
Appearance	Black		
Forms	Particle		
Processing Method	Resin transfer molding Compression molding Injection molding		

Physical	Nominal Value	Unit	Test Method
Density	1.77	g/cm ³	ISO 1183
Molding Shrinkage - Flow	0.20 - 0.35	%	ISO 294-4
Water Absorption (23°C, 24 hr)	0.15	%	ISO 62

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (Injection Molded)	15000	MPa	ISO 527-2
Tensile Stress (Break, Injection Molded)	45.0	MPa	ISO 527-2
Tensile Strain (Break, Injection Molded)	0.55	%	ISO 527-2
Flexural Modulus (Injection Molded)	10000	MPa	ISO 178
Flexural Stress (Injection Molded)	110	MPa	ISO 178

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (Injection Molded)	4.0	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength	8.0	kJ/m ²	ISO 179

Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
1.8 MPa, not annealed	180	°C	ISO 75-2/A
8.0 MPa, not annealed	155	°C	ISO 75-2/C
Linear thermal expansion coefficient			ASTM E831
Flow	3.5E-5	cm/cm/°C	ASTM E831
Lateral	4.0E-5	cm/cm/°C	ASTM E831

Electrical	Nominal Value	Unit	Test Method
Dielectric Strength	25	kV/mm	IEC 60243-1
Comparative Tracking Index	175	V	IEC 60112

Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.60 mm	HB		UL 94
4.00 mm	V-0		UL 94
Injection	Nominal Value	Unit	
Rear Temperature	60.0	°C	
Middle Temperature	73.9	°C	
Nozzle Temperature	87.8	°C	
Processing (Melt) Temp	98.9 - 116	°C	
Mold Temperature	166 - 188	°C	
Injection Pressure	100 - 248	MPa	
Holding Pressure	30.0 - 89.6	MPa	
Back Pressure	4.83 - 15.2	MPa	
Injection instructions			

Plastication: 50rpm Injection Time: 2 to 8 sec Hold Time: 1 to 5 sec/mm Cure Time, 0.125 in: 5 to 12 sec/mm All ISO properties listed were tested in accordance with ISO 3167 The value listed as Molding Shrinkage, ISO 294-4, was tested in accordance with ISO 2577. ISO Type: PF 2 C3 Powder Density, ISO 60: 0.7 to 0.85 g/cm³ Post Shrinkage, ISO 2577: 0.1 to 0.2% HDT A (1.80 MPa) Unannealed, ISO 75A, Injection Molding: 170 to 190°C HDT A (8.0 MPa) Unannealed, ISO 75A, Injection Molding: 145 to 165°C CCLTE, Flow (TMA), ASTM E831, Injection Molding: 30 to 40 cm⁻⁶/cm°C CCLTE, Transverse (TMA), ASTM E831, Injection Molding: 35 to 45 cm⁻⁶/cm°C Flexural Strength, ISO 178, Injection Molding: 100 to 120 MPa Flexural Modulus, ISO 178, Injection Molding: 9 to 11 GPa Strain to failure in Flexure, ISO 178, Injection Molding: 0.9 to 1% Tensile Stress at Break, ISO 527-1,-2, Injection Molding: 35 to 55 MPa Tensile Modulus, ISO 527-1,-2, Injection Molding: 14 to 16 GPa Tensile Strain at Break, ISO 527-1,-2, Injection Molding: 0.5 to 0.6% Charpy Notched Impact Strength, ISO 179, Injection Molding: 3 to 5 kJ/m² Charpy Unnotched Impact Strength, ISO 179, Injection Molding: 7 to 9 kJ/m² Compressive Strength, ISO 604: 130 to 150 MPa Insulation Resistance dry, IEC 167: 1e11 to 1e12 ohm

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